

Attachment #6
Rpt. Misc. - 35

26 June 64

SUBJECT: Quarterly Review Conference - PAR 212 - [REDACTED]

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VISITOR: [REDACTED]

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FROM [REDACTED]

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[REDACTED] answered questions concerning terminology contained in the quarterly report.

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1. Contrast: High and low contrast were defined as $>10:1$ and $1.6:1$ respectively.

2. Haze Effect Versus Altitude: The effects of haze versus altitude as demonstrated by recent low altitude flights (12000 to 16000 feet) indicate insufficient attenuation at these altitudes to simulate high altitude effects. At 50,000 feet or above, we can expect less dependency on weather effects and variations in scene luminance. We know that a 4:1 ratio to be real from black and white acquisition. We further indicated that sensitivity in the blue layer is most affected by haze and there are three (3) possible approaches for correction.

- a. Orientation of effort to the acquisition film.
- b. Orientation of effort to the duplicating film.
- c. Orientation of partial effort to each product.

3. At this time, we must use currently available emulsions having a single blue layer with multiple sensitizers, rather than multiple blue layer materials. It was pointed out that the latter introduces emulsion design problems. Thus we must adjust color balance primarily in the duplicating stage.

4. It was stressed to both visitors that we need at an early date some high altitude color acquisition in order to answer current questions and for predicting results. Until this is achieved, we do not have a complete story on materials. [REDACTED] added that specifications for low altitude (up to 5,000 feet) and medium altitude (above 5,000 to 50,000 feet) were also of interest and needed.

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5. Color Negative Materials: As a result of customer interest in color negative materials for acquisition, it was indicated that reversal materials were preferable because of better definition/resolution capabilities. The

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characteristics of SO-121 were used as an example.

6. Programmed Exposure: We indicated that programmed acquisition exposure is hoped for but cannot be fully relied upon to answer all scene by scene problems. A need will always be for an acquisition material with good exposure latitude characteristics. Wedge filter and wedge density correction (gyro mounted) during acquisition, or in printing, was discussed for oblique angle "takes" since conditions may vary significantly for oblique angle "takes" on the right, versus the left. We indicated that frame-by-frame processing is not a practical approach now.

7. Project Aims: It was generally agreed that we are not primarily interested in a true color original film and that the emphasis is still on the color duplicate transparency. The first generation was defined as the camera original. We further indicated that current aims were toward the retention of color fidelity within the system instead of the super-high resolution now obtainable with current black-and-white systems.

8. Project Needs and Considerations:

a. We proposed to the visitors that we provide a list of specifications for acquisition films to serve as an equipment limitations guide. This might also serve to close the customer's time gap from a new acquisition system to the availability of the equipment to handle it. The visitors indicated the need for negative information also to prevent waste of time on dead-end approaches.

b. The visitors indicated interest in a variable color viewer capability including variable contrast. It was concluded that the degradation in resolution by current optical-electronic devices (TV approach) currently ruled out the usefulness of such a device. However, if, and when an optical-electronic device approaching high resolution as compared to the present cathode ray tube is a possibility it would be of interest to them.

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